

CHEMISTRY ADOLESCENCE EDUCATION, BS

Department Chair: Donna Brestensky, Ph.D.

This program is designed to prepare graduates to teach in secondary education institutions having mastered content area and having met the academic requirements for teacher certification.

This program enables students to obtain initial certification in Adolescence Education in Chemistry. Student complete a chemistry major especially tailored to the New York State Adolescence Education requirements for chemistry while also completing all of the courses required for initial teaching certification.

Formal admission to the School of Education's adolescence education (ADED) certification program (for junior year field block approval) is granted provided a student meets the following qualifications:

- GPA of 3.0 in the academic major
- GPA of at least 2.5 in all courses in biology
- Cumulative GPA of 3.0 or better
- Grades of C (2.0) or better in two writing courses.

Requirements for graduation include

- Cumulative GPA of 3.0
- GPA of 3.0 in all education courses (including SPED courses)
- Minimum GPA of 2.5 in the disciplinary concentration.

Students complete 140 hours of field block experience, during which they apply classroom knowledge with supervised experience in classrooms, as well as student teaching requirements.

Code	Title	Credits
Chemistry		30
CHEM-101 & CHML-101	GENERAL CHEMISTRY I and GEN CHEM I LAB	
CHEM-102 & CHML-102	GENERAL CHEMISTRY II and GEN CHEM II LAB	
CHEM-201 & CHML-201	ANALYTICAL CHEMISTRY and ANALYTICAL CHEM. LAB	
CHEM-301 & CHML-301	ORGANIC CHEMISTRY I and ORGANIC CHEM I LAB	
CHEM-402 & CHML-402	PHYSICAL CHEMISTRY II and PHYSICAL CHEM II LAB	

Electives - Take 9 credits from the below:

CHEM-302	ORGANIC CHEMISTRY II	
CHEM-401	PHYSICAL CHEMISTRY I	
CHEM-431	INSTRUMENTAL ANALYSIS	
CHEM-441	ADVANCED INORGANIC CHEMISTRY	
CHEM-451	ADVANCED PHYSICAL CHEMISTRY	
CHEM-470	MECHANISMS IN BIOLOGICAL SYSTEM	
CHEM-480	SP.TOPICS IN CHEMISTRY	
CHEM-480A	SP TOP. SPECTROSCOPY OF ORGANIC STRUCTURES & UNKNOWNNS	
CHEM-497	WORK EXPERIENCE	
CHEM-498	UNDERGRADUATE RESEARCH	

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<i>Lab Elective - Take One</i>		
CHML-302	ORGANIC CHEM II LAB	
CHML-401	PHYSICAL CHEM I LAB	
CHML-431	INSTRUMENTAL ANALYSIS LAB	
Mathematics		12
MATH-151	CALCULUS I	
MATH-152	CALCULUS II	
MATH-251	CALCULUS III	
Physics		8
PHYS-103 & PHYL-103	GENERAL PHYSICS I and GENERAL PHYSICS I LAB	
PHYS-104 & PHYL-104	GENERAL PHYSICS II and GENERAL PHYSICS LAB II	
Education		38
EDUC-101	SOCIAL FOUNDATIONS OF AMERICAN EDUCATION: A CURRENT ISSUES APPROACH	
SPED-445	INSTRUCTIONAL STRATEGIES FOR MATH & SCIENCE IN INCLUSIVE SECONDARY EDUCATION	
EDUC-208L	INSTRUCTIONAL DESIGN FOR ALL LEARNERS	
EDUC-250	ADOLESCENT DEVELOPMENT & LEARNING	
EDUC-306	MANAGING INTRUCTION/BEHAVIOR IN SEC ED	
EDUC-330	METHODS, MODELS, MANAGEMENT OF INSTRUCTION	
EDUC-354	PROBLEMS OF LITERACY IN SEC SCHOOLS	
EDUC-360	LITERACY IN THE CONTENT AREA	
EDUC-406	EVALUATING LEARNERS & LEARNING	
EDUC-495	SEC.STUD.TEACHING:GRADES 7-9	
EDUC-495A	SR SEM: PROF ASSESSMENT & REFLECTION	
EDUC-496	SEC STUD TEACH:GRADES 10-12	
EDUC-341	SECONDARY SCIENCE METHODS	
<i>Workshops</i>		
EDUC-099A	SAFE SCHOOLS WORKSHOP	
EDUC-099B	CHILD ABUSE PREVENTION	
EDUC-099D	CULTURAL DIVERSITY WORKSHOP	
EDUC-099F	Harassment, Bullying, Cyberbullying & Di	
EDUC-099K	EXPERIENCE IN DIVERSE ENVIRONMENTS	
Foreign Language ¹		3
General Education Requirements (https://catalog.sbu.edu/undergraduate/degree-requirements/)		37
General Electives		3
Total Credits		124

¹ The foreign language must be at the level of 202 or higher. Students not prepared to begin at this level will need to take additional courses in language.

First Year	Credits	Spring	Credits
Fall			
CHEM-101 & CHML-101	4	CHEM-102 & CHML-102	4
MATH-151	4	MATH-152	4
SBU-101	2	Foreign Language 202 ¹	3
EDUC-101	3	SBU-102	1
Foreign Language 201 ¹	3	ENG-101	3
	16		15

Second Year

Fall	Credits	Spring	Credits
CHEM-301 & CHML-301	4	CHEM-201 & CHML-201	4
MATH-251	4	PHYS-104 & PHYL-104	4
PHYS-103 & PHYL-103	4	ENG-102	3
SPED-445	4	EDUC-250	3
EDUC-099A	0		
EDUC-099B	0		
EDUC-099F	0		
	16		14

Third Year

Fall	Credits	Spring	Credits
CHEM Elective	3	CHEM Elective	3
THFS-101	3	CHML Elective	1
PHIL-104	3	EDUC-406	3
General Education	3	EDUC-306	3
EDUC-354	3	EDUC-330	2
		EDUC-341	1
		EDUC-360	3
	15		16

Fourth Year

Fall	Credits	Spring	Credits
General Education	3	CHEM-402 & CHML-402	4
EDUC-495	5	CHEM Elective	3
EDUC-496	5	General Education	3
EDUC-495A	3	General Education	3
EDUC-099D	0	Elective	3
	16		16

Total Credits 124

¹ Previous education and aptitude determine whether a student takes foreign language 101, 102 and/or 201 before taking 202 or higher. Courses below 202 will count as general electives.